

## CLAIMS

1. A controller of an A.C. generator for vehicles, comprising:  
a switching element inserted in series in a field coil of an A.C. generator for intermittently controlling a field current supplied to the field coil in accordance with an output voltage from the A.C. generator; and

conduction rate control means for detecting a rotational speed of the A.C. generator to control a conduction rate of the switching element in accordance with an increase in rotational speed.

2. A controller of an A.C. generator for vehicles according to claim 1, wherein the conduction rate control means comprises:

an f-V converter for converting a frequency proportional to the rotational speed of the A.C. generator into a voltage;

a triangular waveform generator for generating and outputting a predetermined triangular waveform; and

a comparator for controlling the conduction rate of the switching element in accordance with a magnitude relationship between a level of the voltage obtained through the f-V conversion in the f-V converter and a level of the triangular waveform and which is outputted from the triangular waveform generator.

3. A controller of an A.C. generator for vehicles according

to claim 2, wherein the conduction rate control means further comprises temperature detection means for detecting a temperature of a predetermined position of the A.C. generator, and the temperature detection means, when a detected temperature is equal to or higher than a predetermined temperature, operates the f-V converter.

4. A controller of an A.C. generator for vehicles according to claim 3, wherein the temperature detection means comprises a thermosensitive semiconductor element.

5. A controller of an A.C. generator for vehicles according to claim 3, wherein the temperature detection means comprises a thermosensitive resistance element having a positive resistance temperature coefficient.

6. A controller of an A.C. generator for vehicles according to claim 3, wherein the temperature detection means comprises a thermosensitive resistance element having a negative resistance temperature coefficient.